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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,638	09/04/2003	George Triantopoulos	577-520 CON	4828
23869	7590	04/05/2004		
			EXAMINER	
			NGUYEN, CHAU N	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/654,638	TRIANTOPOULOS ET AL. <i>[Signature]</i>
	Examiner	Art Unit
	Chau N Nguyen	2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) 7-9 is/are allowed.
- 6) Claim(s) 1,3,4,6 and 14-17 is/are rejected.
- 7) Claim(s) 2 and 5 is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/4/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: ____ . |

DETAILED ACTION

Claim Objections

1. Claims 4, 7 and 9 are objected to because of the following informalities:
 - in claim 4, line 2, "said conductors" lacks antecedent basis,
 - in claim 7, line 3, change "slot" to --slots--,
 - in claim 7, line 10, change "aperture" to --apertures-- and "sides" to --side--,
 - in claim 7, line 13, before "aperture" insert --at least one-- and change "end" to --ended--,
 - in claim 9, line 1, change "at least one of said apertures" to --said at least one aperture--,
 - in claim 9, line 2, change "one of said aperture" to --said at least one aperture--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not provide a detailed description to enable one skilled in the art to make/use the claimed subject matter of "the aperture comprising sections of different shapes and sizes to accommodate one or said conductors of various ranges". Specifically, the drawings show each aperture comprises only one shape and size in one particular connector. The aperture can have different shapes and sizes, but each different shape and size is provided in different connectors. Not all the different shapes and sizes are provided in one connector.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 3, 4, 6 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrader (5,103,068) in view of Park (5,936,200).

Schrader discloses a ground connector capable of being crimped, comprising a deformable generally U-shaped conductive body (Fig. 3) comprising a pair of legs (40) projecting from the body, the legs defining a central slot (32), and at least one aperture (34) to receive at least one conductor therein.

Schrader does not disclose a busbar being received in the central slot, a plurality of teeth on at least one of the legs projecting into the slot, nor the central slot being slightly opened when the body is deformed to initiate a partial crimp between the body and the conductor within the aperture.

Although not specifically disclosed by Schrader, it would have been obvious to one skilled in the art to use the central slot of Schrader for receiving a busbar when the connector is used to make electrical contact between a conductor and the busbar since it has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Park discloses a wire connector comprising a plurality of teeth (39) projecting inward of a slot (37) to grip, hold and make electrical contact with a wire inserted therein. It would have been obvious to one skilled in the art to provide one of the legs of Schrader with the teeth taught by Park to not only make electrical contact with the busbar but also to grip and hold the busbar therein.

From the common knowledge and common sense of a person of ordinary skill in the art and from Figure 3 of Schrader, it can be seen that if only the aperture 34 of the body 30 was initially crimped to provide the electrical contact between the aperture and the conductor, then the central slot 32 of the body would

be slightly opened. In other words, the central slot 32 and the aperture 34 being arranged in opposite ends of the body, if force is used to crimp only the aperture 34, then the slot 32 in the other end would be slightly opened.

Schrader also discloses the at least one aperture including access opening extending through a lower surface of the body, to thereby permit deformation of the body at the aperture and a secure crimp connection of the body around the conductor (re claim 3), the at least one aperture extending through the body at location opposite the pair of legs (re claim 6), and claim 14 is a method counterpart of claim 1. Re claim 4, it would have been obvious to one skilled in the art to modify the aperture of Schrader to have different shapes and sizes to meet the specific use of the resulting connector since it has been held that a change in shape and size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237. Re claims 15-17, it would have been obvious to one skilled in the art to use a crimping tool which comprises a pair of spaced apart dies and to move the dies toward the opposite ends of the body to crimp the body of Schrader since a crimping tool having a pair of spaced apart dies is known in the art for being used to crimp electrical connectors.

Allowable Subject Matter

7. Claims 7-9 are allowed.
8. Claims 2 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest a crimp connector comprising all the features as recited in the claims and in combination with a pair of outwardly angled cut outs at a closed end of the central slot (re claim 2), each pair of legs being provided at opposite ends of the body (re claim 5), and a plurality of apertures extending through the body (re claim 7).

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chau N Nguyen
Primary Examiner
Art Unit 2831